FIG. 1

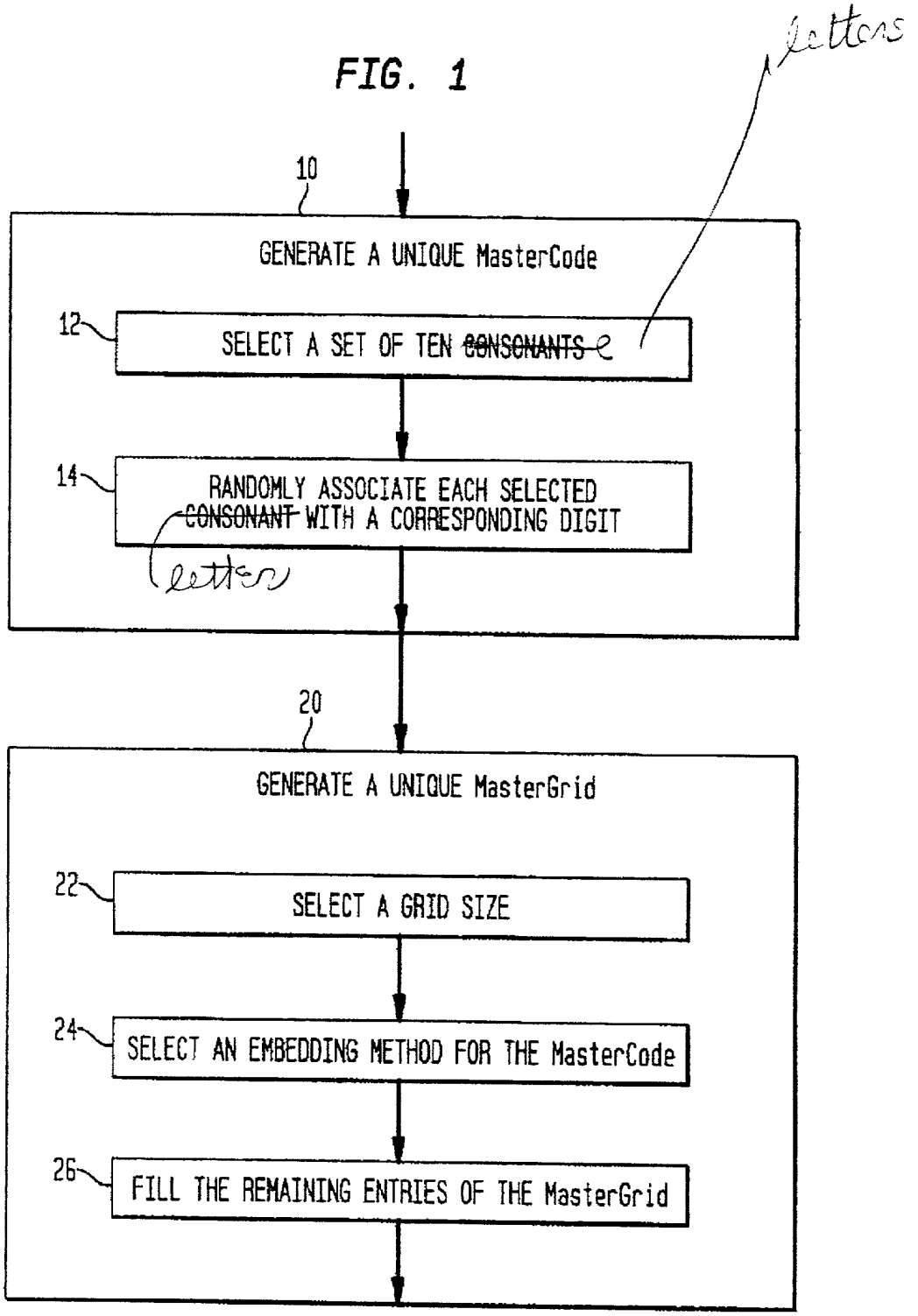

letters
10
GENERATE A UNIQUE MasterCode
12
SELECT A SET OF TEN ~~CONSONANTS~~ e
14
RANDOMLY ASSOCIATE EACH SELECTED ~~CONSONANT~~ WITH A CORRESPONDING DIGIT
letter
20
GENERATE A UNIQUE MasterGrid
22
SELECT A GRID SIZE
24
SELECT AN EMBEDDING METHOD FOR THE MasterCode
26
FILL THE REMAINING ENTRIES OF THE MasterGrid

FIG. 2

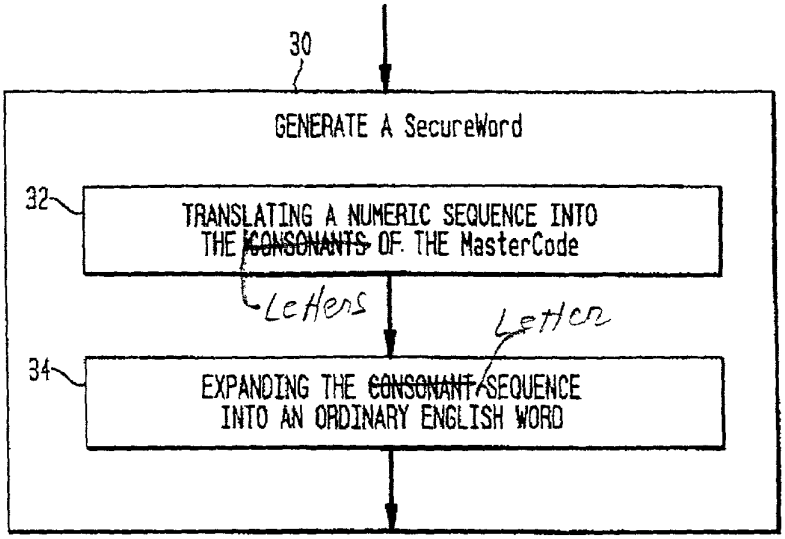

30
GENERATE A SecureWord
32
TRANSLATING A NUMERIC SEQUENCE INTO THE ~~CONSONANTS~~ OF THE MasterCode
Letters
Letter
34
EXPANDING THE ~~CONSONANT~~ SEQUENCE INTO AN ORDINARY ENGLISH WORD

FIG. 3

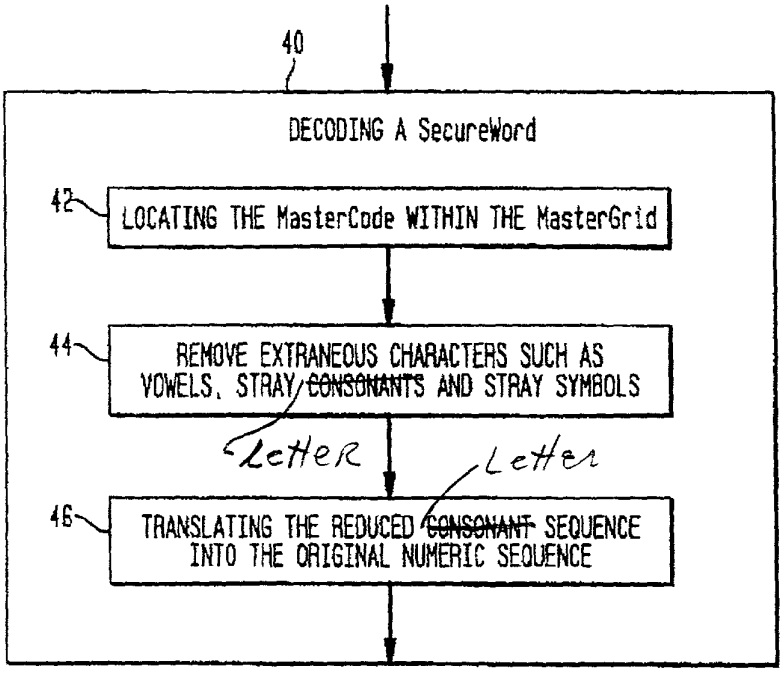

40
DECODING A SecureWord
42
LOCATING THE MasterCode WITHIN THE MasterGrid
44
REMOVE EXTRANEOUS CHARACTERS SUCH AS VOWELS, STRAY ~~CONSONANTS~~ AND STRAY SYMBOLS
Letter
Letter
46
TRANSLATING THE REDUCED ~~CONSONANT~~ SEQUENCE INTO THE ORIGINAL NUMERIC SEQUENCE

FIG. 4

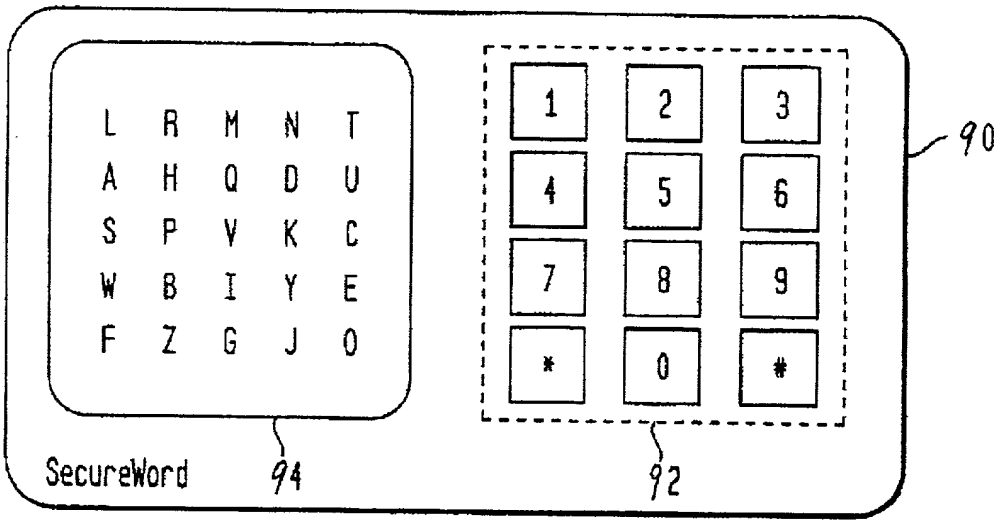

L R M N T
A H Q D U
S P V K C
W B I Y E
F Z G J O
1 2 3
4 5 6
7 8 9
* 0 #
SecureWord
94
92
90

FIG. 5

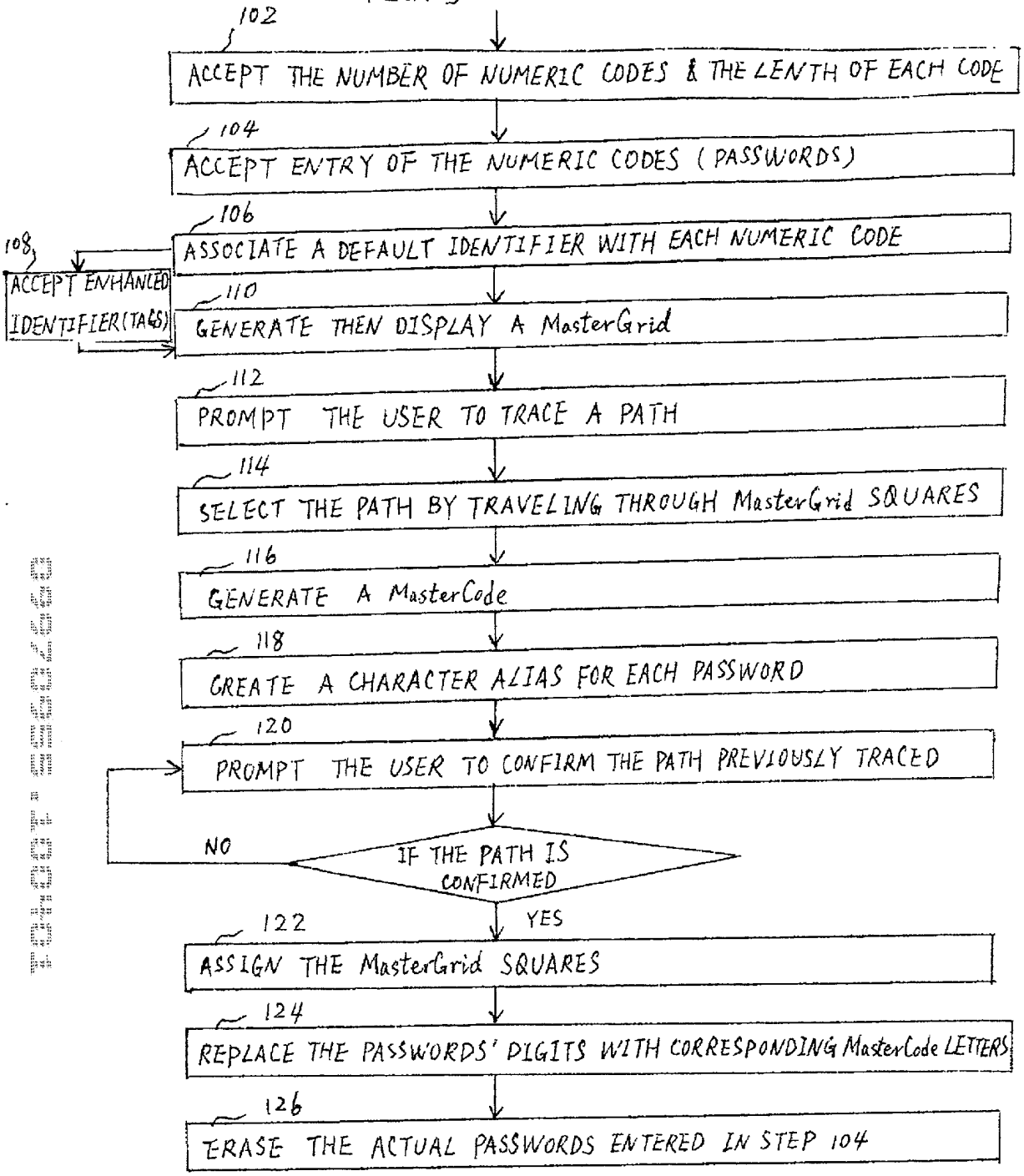
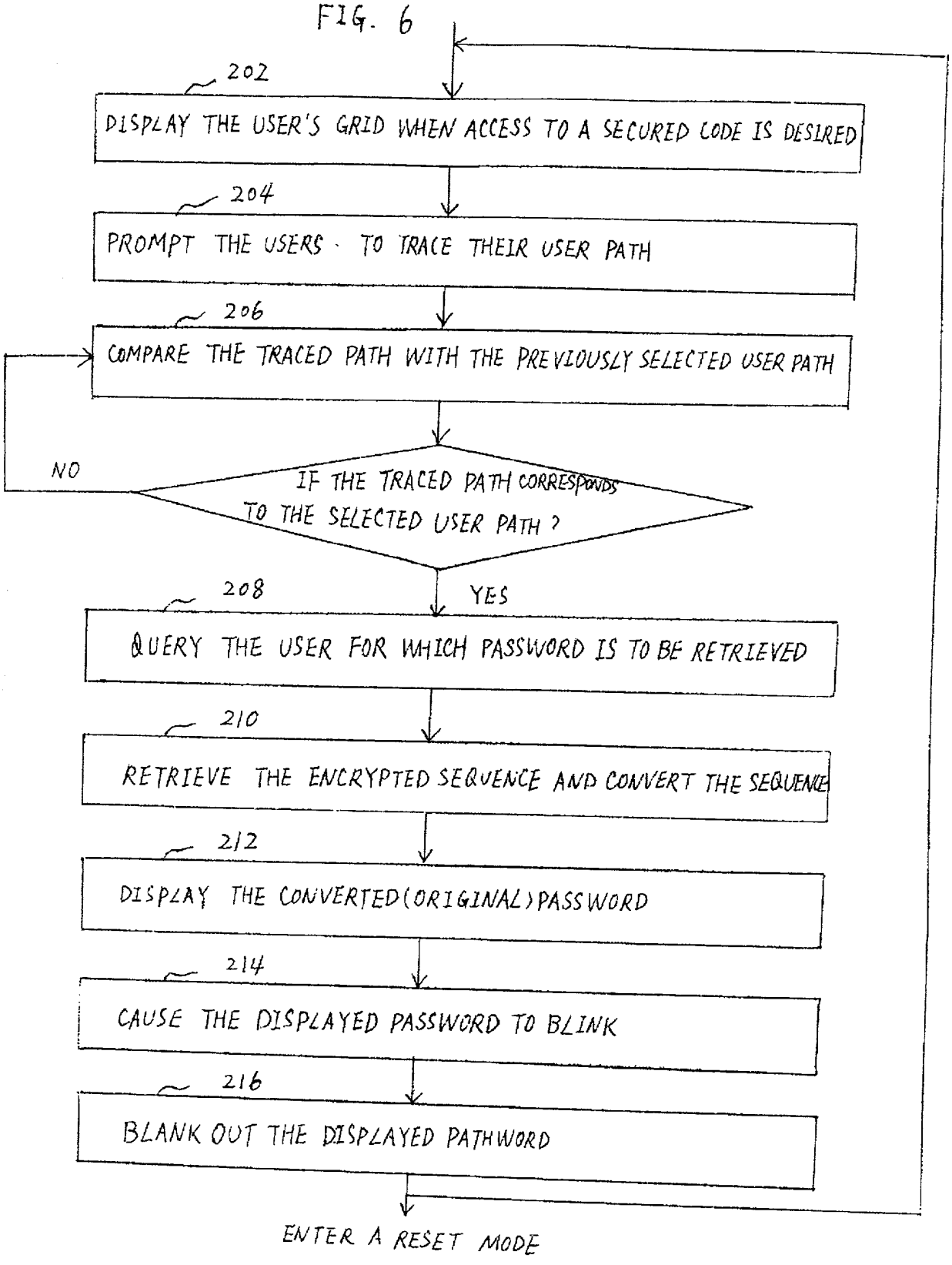

102
ACCEPT THE NUMBER OF NUMERIC CODES & THE LENTH OF EACH CODE
104
ACCEPT ENTRY OF THE NUMERIC CODES (PASSWORDS)
106
ASSOCIATE A DEFAULT IDENTIFIER WITH EACH NUMERIC CODE
108
ACCEPT ENHANCED IDENTIFIER(TAGS)
110
GENERATE THEN DISPLAY A MasterGrid
112
PROMPT THE USER TO TRACE A PATH
114
SELECT THE PATH BY TRAVELING THROUGH MasterGrid SQUARES
116
GENERATE A MasterCode
118
CREATE A CHARACTER ALIAS FOR EACH PASSWORD
120
PROMPT THE USER TO CONFIRM THE PATH PREVIOUSLY TRACED
NO
IF THE PATH IS CONFIRMED
YES
122
ASSIGN THE MasterGrid SQUARES
124
REPLACE THE PASSWORDS' DIGITS WITH CORRESPONDING MasterCode LETTERS
126
ERASE THE ACTUAL PASSWORDS ENTERED IN STEP 104

FIG. 6


202
DISPLAY THE USER'S GRID WHEN ACCESS TO A SECURED CODE IS DESIRED
204
PROMPT THE USERS TO TRACE THEIR USER PATH
206
COMPARE THE TRACED PATH WITH THE PREVIOUSLY SELECTED USER PATH
NO
IF THE TRACED PATH CORRESPONDS TO THE SELECTED USER PATH ?
YES
208
QUERY THE USER FOR WHICH PASSWORD IS TO BE RETRIEVED
210
RETRIEVE THE ENCRYPTED SEQUENCE AND CONVERT THE SEQUENCE
212
DISPLAY THE CONVERTED(ORIGINAL)PASSWORD
214
CAUSE THE DISPLAYED PASSWORD TO BLINK
216
BLANK OUT THE DISPLAYED PATHWORD
ENTER A RESET MODE

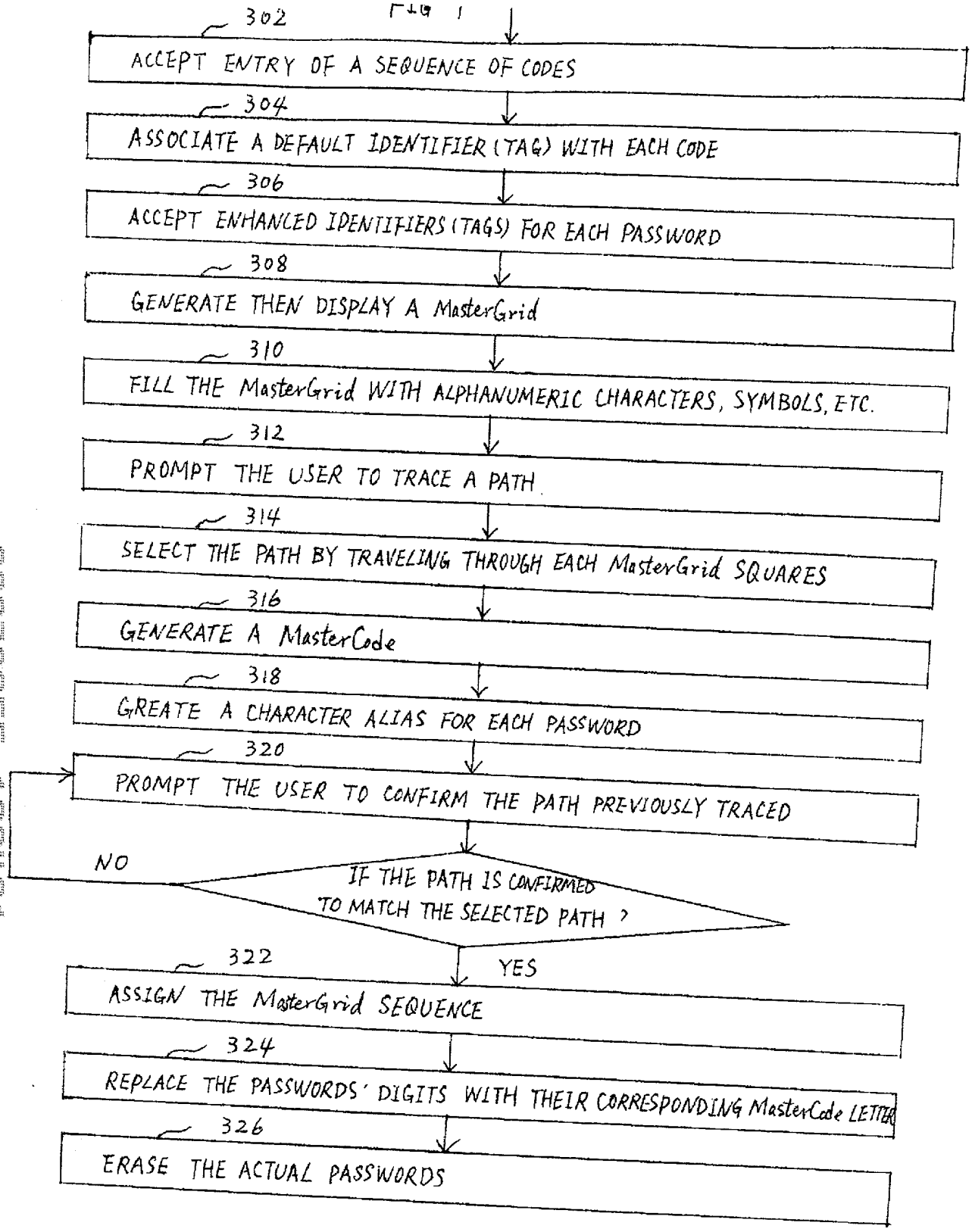

302
ACCEPT ENTRY OF A SEQUENCE OF CODES
304
ASSOCIATE A DEFAULT IDENTIFIER (TAG) WITH EACH CODE
306
ACCEPT ENHANCED IDENTIFIERS (TAGS) FOR EACH PASSWORD
308
GENERATE THEN DISPLAY A MasterGrid
310
FILL THE MasterGrid WITH ALPHANUMERIC CHARACTERS, SYMBOLS, ETC.
312
PROMPT THE USER TO TRACE A PATH
314
SELECT THE PATH BY TRAVELING THROUGH EACH MasterGrid SQUARES
316
GENERATE A MasterCode
318
GREATE A CHARACTER ALIAS FOR EACH PASSWORD
320
PROMPT THE USER TO CONFIRM THE PATH PREVIOUSLY TRACED
NO
IF THE PATH IS CONFIRMED TO MATCH THE SELECTED PATH ?
YES
322
ASSIGN THE MasterGrid SEQUENCE
324
REPLACE THE PASSWORDS' DIGITS WITH THEIR CORRESPONDING MasterCode LETTER
326
ERASE THE ACTUAL PASSWORDS

FIG. 8

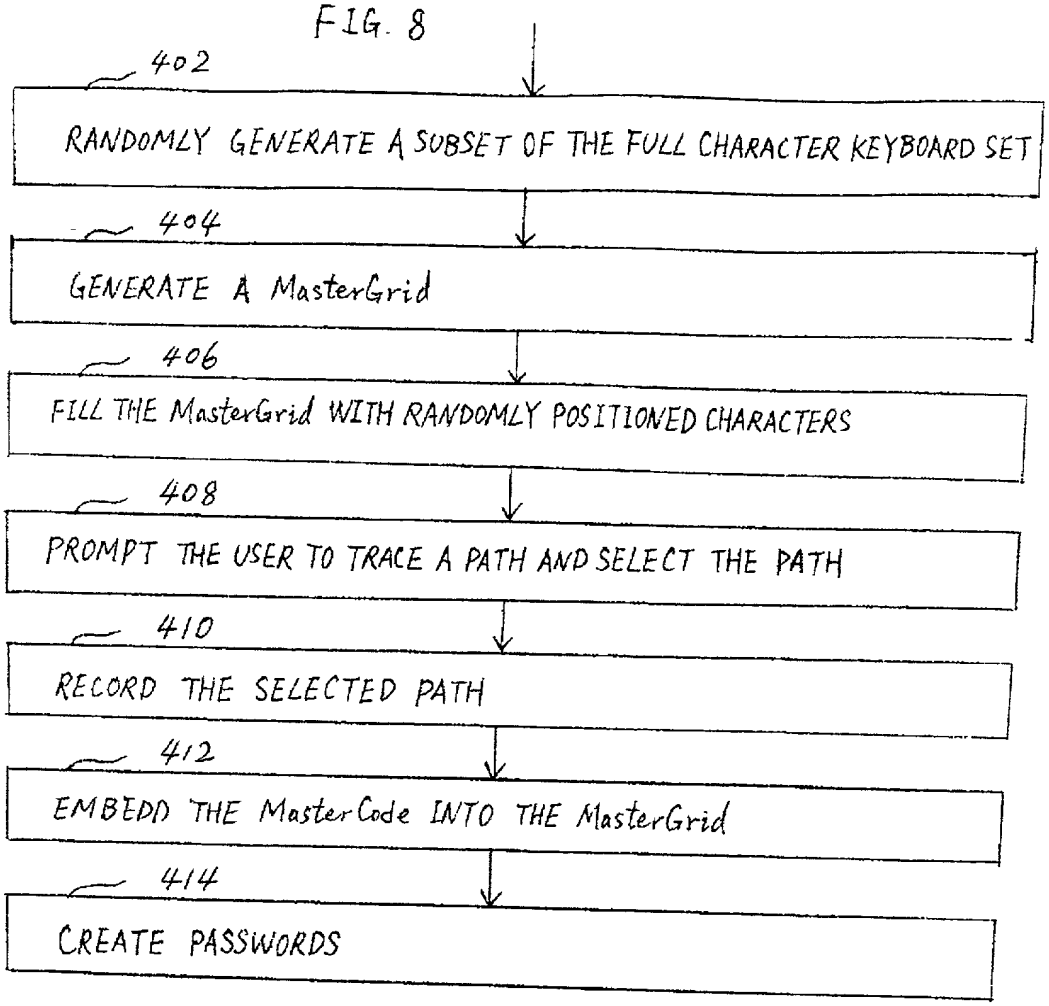

402
RANDOMLY GENERATE A SUBSET OF THE FULL CHARACTER KEYBOARD SET
404
GENERATE A MasterGrid
406
FILL THE MasterGrid WITH RANDOMLY POSITIONED CHARACTERS
408
PROMPT THE USER TO TRACE A PATH AND SELECT THE PATH
410
RECORD THE SELECTED PATH
412
EMBEDD THE MasterCode INTO THE MasterGrid
414
CREATE PASSWORDS

FIG. 9

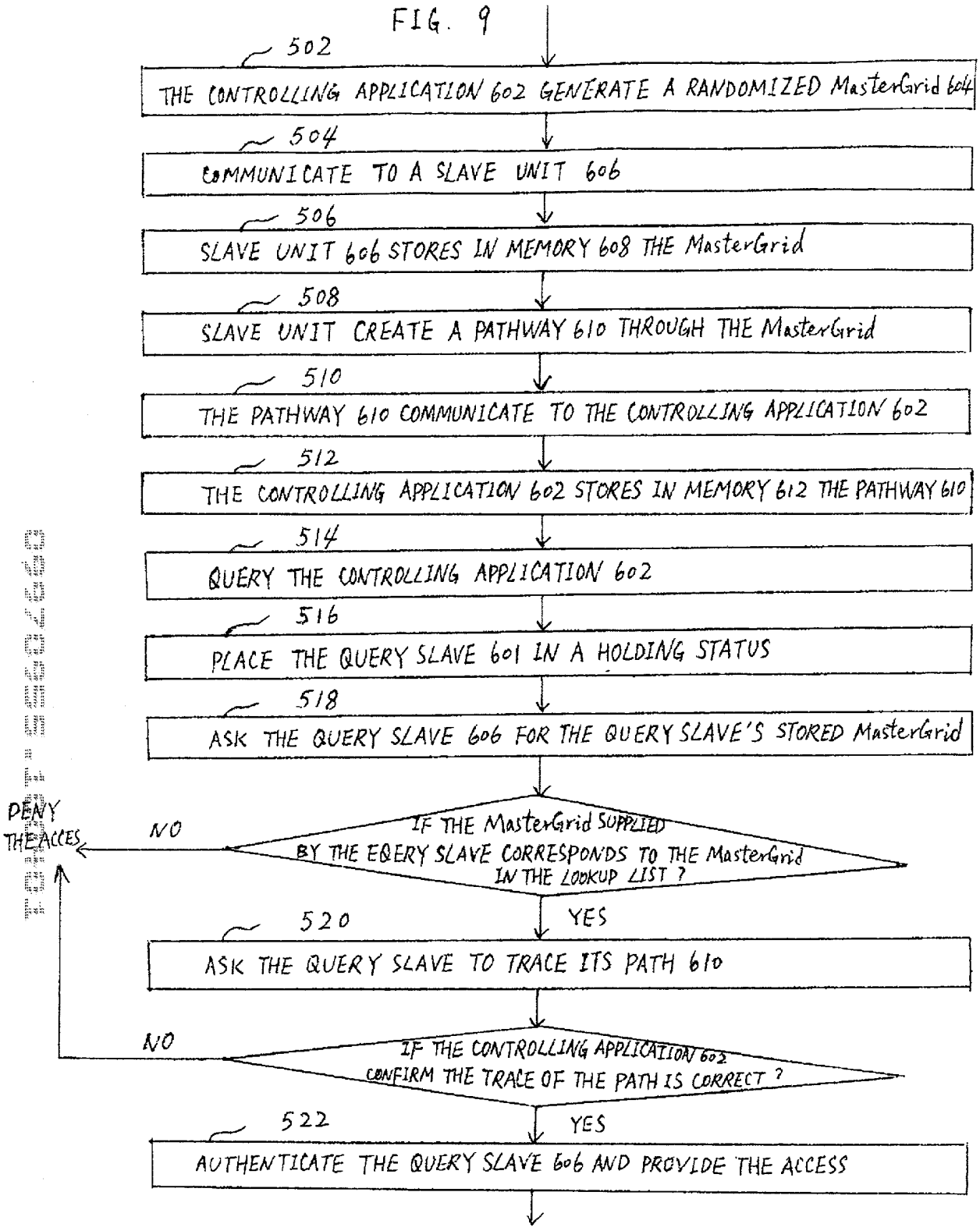
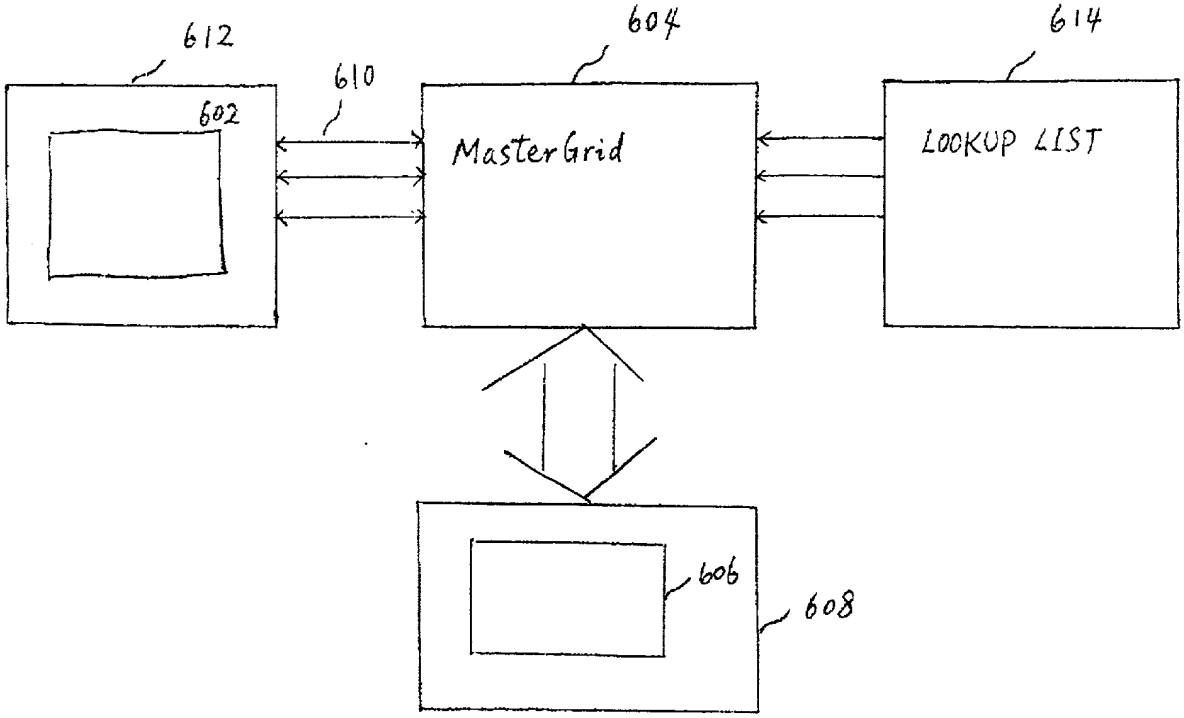

502
THE CONTROLLING APPLICATION 602 GENERATE A RANDOMIZED MasterGrid 604
504
COMMUNICATE TO A SLAVE UNIT 606
506
SLAVE UNIT 606 STORES IN MEMORY 608 THE MasterGrid
508
SLAVE UNIT CREATE A PATHWAY 610 THROUGH THE MasterGrid
510
THE PATHWAY 610 COMMUNICATE TO THE CONTROLLING APPLICATION 602
512
THE CONTROLLING APPLICATION 602 STORES IN MEMORY 612 THE PATHWAY 610
514
QUERY THE CONTROLLING APPLICATION 602
516
PLACE THE QUERY SLAVE 601 IN A HOLDING STATUS
518
ASK THE QUERY SLAVE 606 FOR THE QUERY SLAVE'S STORED MasterGrid
IF THE MasterGrid SUPPLIED BY THE EQERY SLAVE CORRESPONDS TO THE MasterGrid IN THE LOOKUP LIST ?
NO
DENY THE ACCES
YES
520
ASK THE QUERY SLAVE TO TRACE ITS PATH 610
IF THE CONTROLLING APPLICATION 602 CONFIRM THE TRACE OF THE PATH IS CORRECT ?
NO
YES
522
AUTHENTICATE THE QUERY SLAVE 606 AND PROVIDE THE ACCESS

FIG. 10



MasterCode

N r B p l Q s : 9 & 2 d _ T x ←700

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Fig 11

[D]

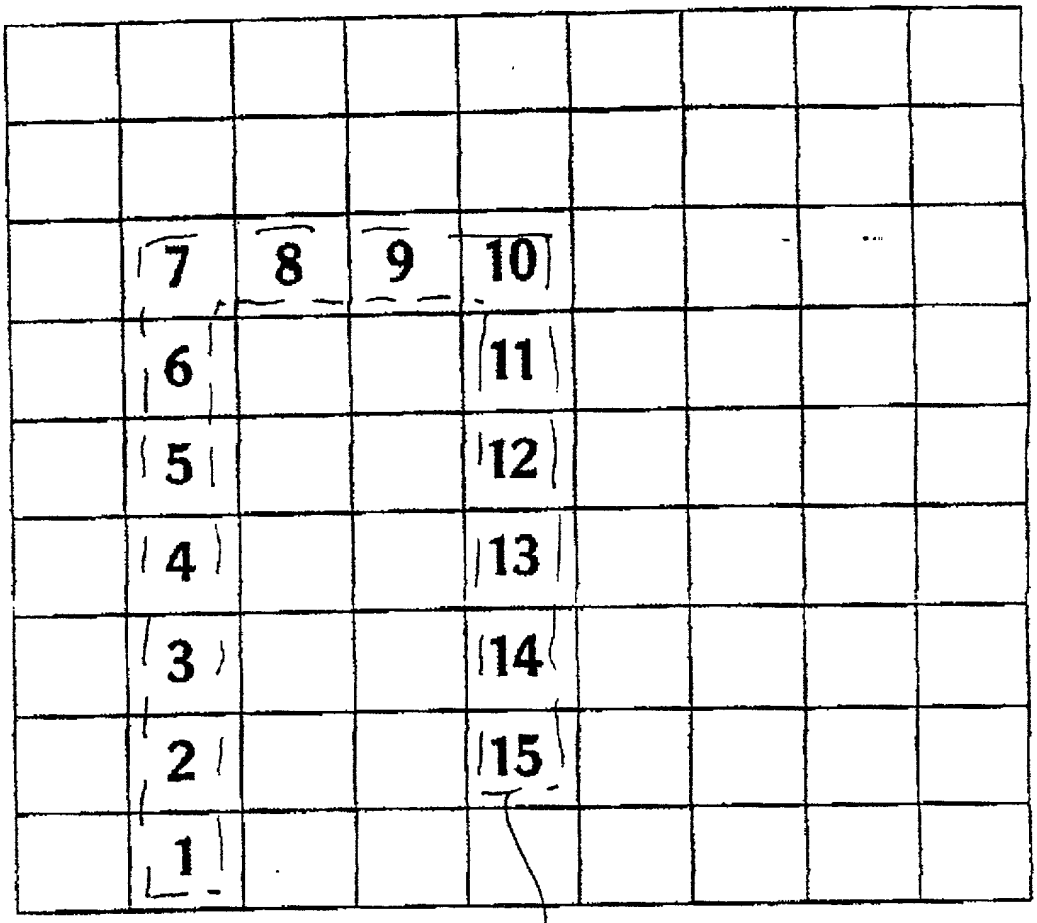


Fig 12

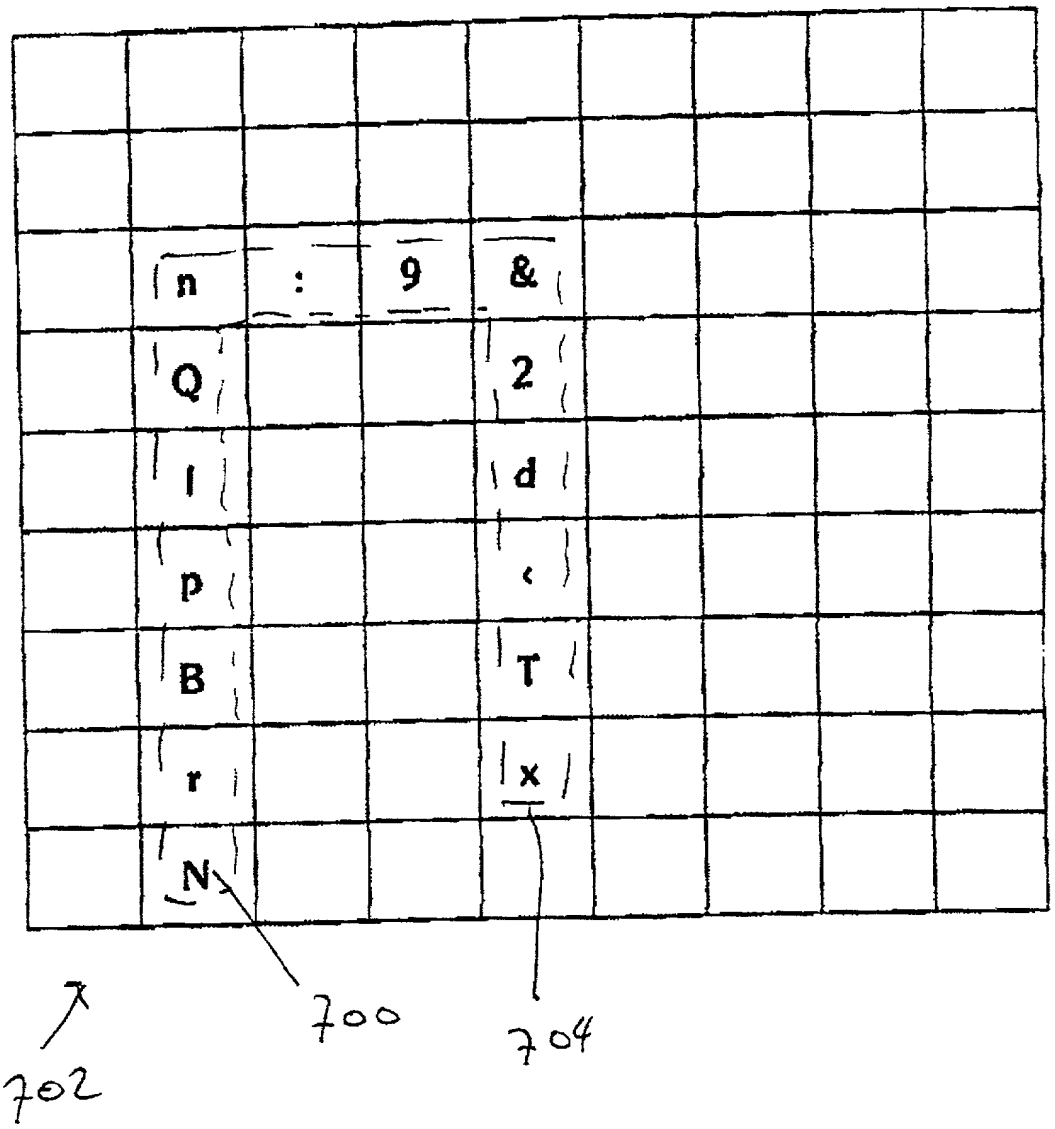


Fig 13

[F]

f	)	/	!	8	t	v	b	F
j	}	O	4	%	M	H	k	{
s	n	:	9	&	J	0	_	#
Y	Q	I	m	2	L	a	6	?
E	l	y	X	d	z	e	C	3
g	p	V	A	‹	q	S	(	R
7	B	$	›	T	]	-	h	G
W	r	D	w	x	Z	5	c	o
U	N	@	u	[	i	P	K	*

706

Fig 14

[G]

MasterCode

N r B p l Q s : 9 & 2 d _ T x

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

n l T : p ~708

x N d Q 9 ~711

2 _ B & r ~709

r 2 T 9 l ~712

Q B T p ~710

Fig 15

[H]

MasterCode

NrbplQs:9&2d_Tx — 700

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

n l T : p — 708
07 05 14 08 04

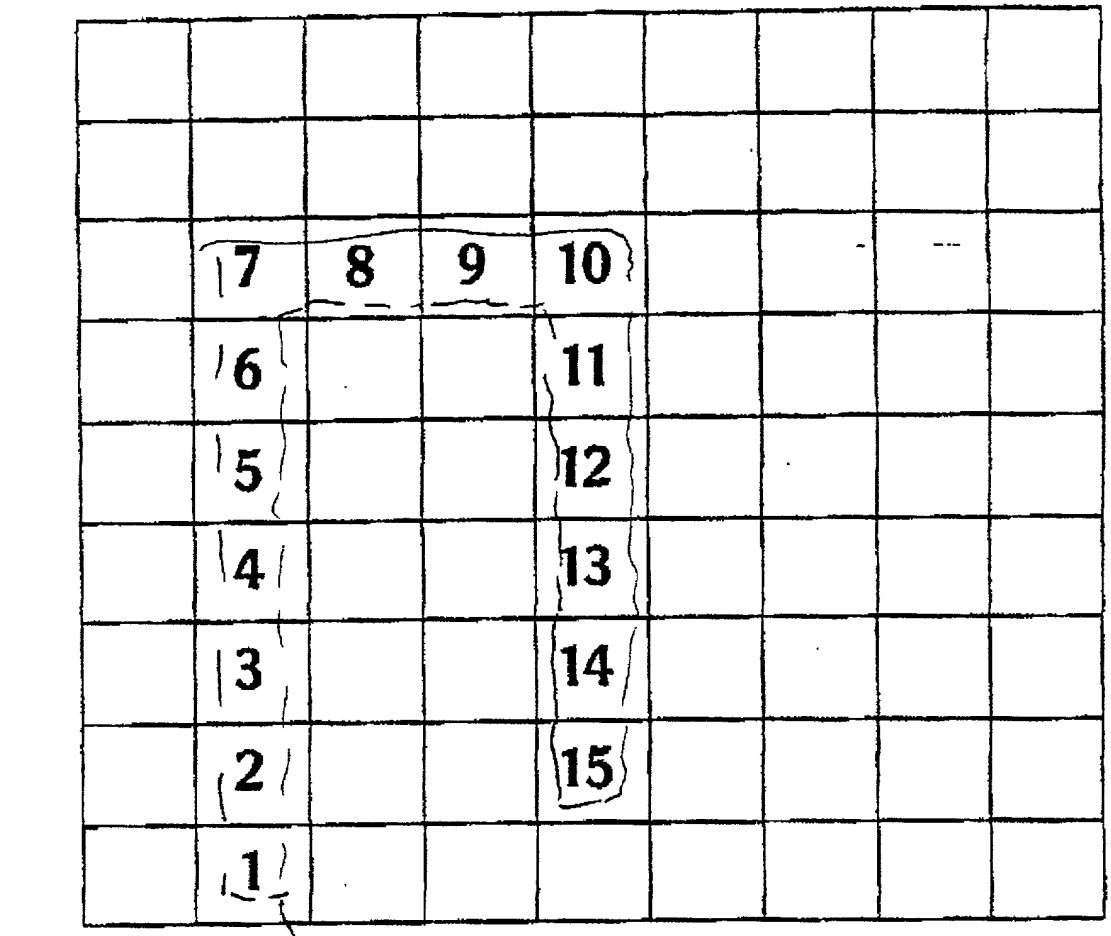
2 _ B &r — 709
11 13 03 10 02

Q B T p — 710
06 03 14 04

x N d Q 9 — 711
15 01 12 06 09

r 2 T 9 1 — 712
02 11 14 09 05

Fig 16



N r B p l Q s : 9 & 2 d ‹ T x — 700

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

n l T : p — 708
07 05 14 08 04

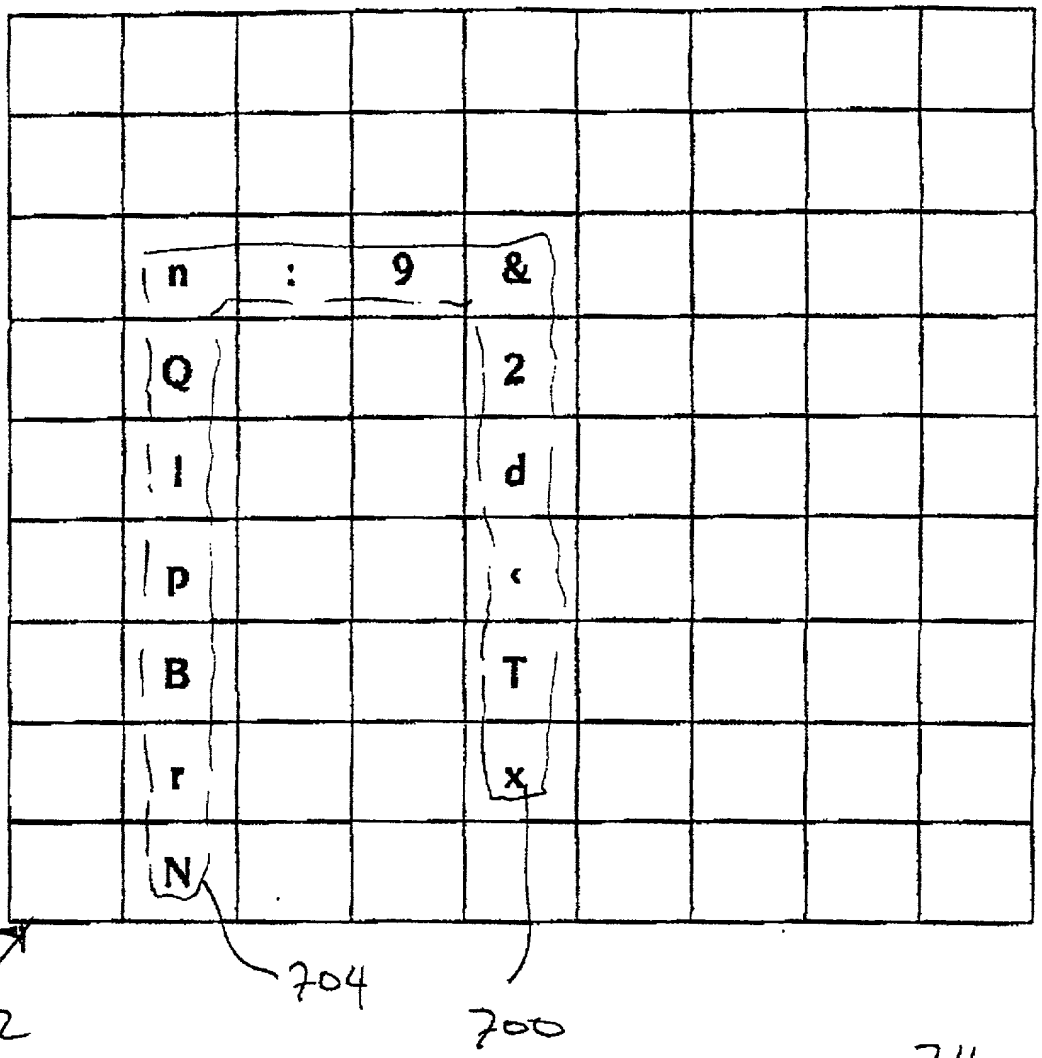
x N d Q 9 — 711
15 01 12 06 09

2 ‹ B & r — 709
11 13 03 10 02

r 2 T 9 l — 712
02 11 14 09 05

Q B T p — 710
06 03 14 04

Fig 17



n l I : p ~708
07 05 14 08 04

x N d Q 9 ~711
15 01 12 06 09

2 ‹ B & r ~709
11 13 03 10 02

r 2 I 9 l ~712
02 11 14 09 05

Q B I p ~710
06 03 14 04

Fig. 18

[K]

f	)	/	!	8	t	v	b	F
j	}	O	4	%	M	H	k	{
s	n	:	9	&	J	0	_	#
Y	Q	I	m	2	L	a	6	?
E	l	y	X	d	z	e	C	3
g	p	V	A	‹	q	S	(	R
7	B	$	›	T	]	-	h	G
W	r	D	w	x	Z	5	c	o
U	N	@	u	[	i	P	K	*

706

07 05 14 08 04
15 01 12 06 09
11 13 03 10 02
02 11 14 09 05
06 03 14 04

Fig. 19